

Claims

1. An electromagnetic transducer having, in combination,
permanent magnet means forming a flux field extending in a direction
between opposing pole faces across a working gap,
5 an electrical signal coil,
an elongate armature supported at one end thereof, extending through
said coil and having its other end extending into said gap, said other end being vibratory
in said direction and adapted for connection to a diaphragm, and
snubber means secured in relation to the permanent magnet means and
10 having a surface oriented to limit excursions of the armature normal to said direction.
2. A transducer according to claim 1, wherein said one end of the armature
comprises an outer arm extending from the permanent magnet means generally parallel
to said other end, and a connecting portion integral with and connecting between said
ends.
- 15 3. A transducer according to claim 1, wherein the snubber means comprise
at least one filler piece extending between said magnets.
4. A transducer according to claim 3, wherein the permanent magnet means
comprise a magnet strap and a pair of permanent magnets attached to the strap, the filler
piece being attached to said strap.
- 20 5. A transducer according to claim 4, wherein the magnet strap forms a
closed loop, the snubber means comprising two said filler pieces in facing relation
secured to and within said loop.
6. A transducer according to claim 4, wherein the filler piece extends
between the strap and sides of the magnets unattached to the strap for locating the
25 magnets thereon.
7. A transducer according to claim 1, wherein the snubber means comprise
a unitary member attached to the permanent magnet means and having spaced, mutually
facing parallel surfaces with the armature extending therebetween.
8. A transducer according to claim 7, wherein the permanent magnet means
30 comprise a magnet strap and a pair of permanent magnets attached to the strap, said
unitary member being attached to the magnet strap.

9. A transducer according to claim 8, in which the unitary member has a plastic attachment to the magnet strap for preliminary rotational adjustment of said parallel surfaces about an axis normal to said direction.

10. A transducer according to claim 9, in which the unitary member has rigid
5 attachments to the magnet strap in the regions of said parallel surfaces.